

ASOS MODIFICATION NOTE 16 (for Electronics Technicians)

Engineering Division

W/OSO31:MGC

SUBJECT : Deactivation of Hygrothermometer Autobalance Module

PURPOSE : Improper operation of the autobalance system results in autobalance values that are too high. The high values result in erroneous dirty mirror diagnostic and mirror icing. This is an interim modification to reduce the number of false alarms. Correction of the autobalance problem is underway and, when completed, the autobalance will be reactivated.

EQUIPMENT AFFECTED: ASOS

PARTS REQUIRED : None

MOD PROCUREMENT : N/A

SPECIAL TOOLS : None

TIME REQUIRED : 1 hour

EFFECT ON OTHER INSTRUCTIONS : This modification must be done concurrently with Modification 17. Ignore all ASOS Site Technical Manual Instructions regarding the fan fail circuit. Future revisions to the ASOS Site Technical Manual will reflect this change.

CERTIFICATION STATEMENT : This modification was tested for operational integrity in the Engineering Design Branch laboratory, the Silver Spring, MD ASOS site, and a Sterling, VA ASOS site.

GENERAL

This modification deactivates the autobalance in ASOS hygrothermometers by disconnecting the autobalance from the remainder of the electronics. The autobalance is to remain deactivated until further notice. The modification is to be done for all ASOS hygrothermometers. A separate modification note will be issued for existing station H0-83 hygrothermometers.

BEFORE DEACTIVATION OF AUTOBALANCE MODULE.

1. Call the AOMC at 1-800-242-8194. Inform the person who answers the phone at which office you will be deactivating the autobalance module. Confirm that AOMC will provide access to the site-specific data base.
2. For commissioned sites, get approval of the responsible MIC/OIC before starting deactivation. For non-commissioned sites, the el tech must coordinate with the site MIC/OIC before starting deactivation. You may deactivate on any day of the month if permission is granted and the restrictions in steps 3 and 4 are complied with.

3. **Commissioned Sites Only:** Do **not** start deactivation during bad weather, precipitation, instrument flight rule (IFR) conditions, or if any of those conditions is expected within 3 hours. These meteorological conditions will be defined by the responsible MIC/OIC.
4. Do not start deactivation at a time that will conflict with scheduled synoptic observations at 00, 03, 06, 09, 12, 15, 18, and 21Z. Although about 45 minutes should be sufficient, allow 1 hour to complete deactivation and restart ASOS.
5. Immediately before beginning work at NWS staffed sites, the MIC/OIC/ observer will inform the tower and any other critical users that the hygrothermometer will be shut off (at unstaffed sites, the el tech will inform tower). He/She will alert towers using Controller Video Displays (CVD) and Operator Interface Devices (OID) to log off and shut down display power to avoid confusion. At commissioned sites only, download the following data to laptop using the direct command mode: 5-minute data (12 hrs.), SYSLOG information (24 hrs.), SHEF messages (24 hrs.), and any 2-hour archive files.
6. Do not begin the deactivation process, i.e., halt ASOS, until immediately after an hourly observation has been transmitted. At NWS-staffed sites, normal backup observing procedures will be implemented.

PROCEDURE

1. Follow normal procedures for maintenance and powering down the hygrothermometer.
2. Turn power to the hygrothermometer off at the DCP.
3. Locate the autobalance module A5. Disconnect the autobalance 9-pin, D-type connector J2. Restrain the plug by attaching one side to the mating connector. Replace the remaining screw and washer into the other side of the mating connector. See Figure 1 for details.
4. Turn power on to the hygrothermometer.
5. Clean the mirror and calibrate the optical loop using ASOS Site Technical Manual Procedures (reference chapter 5).
6. Follow normal procedures for returning the ASOS to normal operation.
7. Make appropriate entries in the SYSLOG using the Maintenance Action keys, Field Modification keys, and comment fields. Follow these steps:
 1. Log on as TECH.
 2. Key the MAINT screen.
 3. Key the ACTION page.
 - 3a. Press the Start Key.
 - 3b. Exit, log off and complete the modification.
 - 3c. Log on as TECH once the modification has been completed.
 - 3d. Key the MAINT Screen.
 - 3e. Key the ACTION Page.

4. Key FMK. Enter the Modification Note (MOD) number as: MOD 16. On the second line of the screen verify that only MOD 16 is displayed. Complete by entering Y in the Y/N if only MOD 16 is displayed.
5. Check the SYSLOG and verify the FMK message. Notify the AOMC via telephone that MOD 16 is complete.

REPORTING MODIFICATION

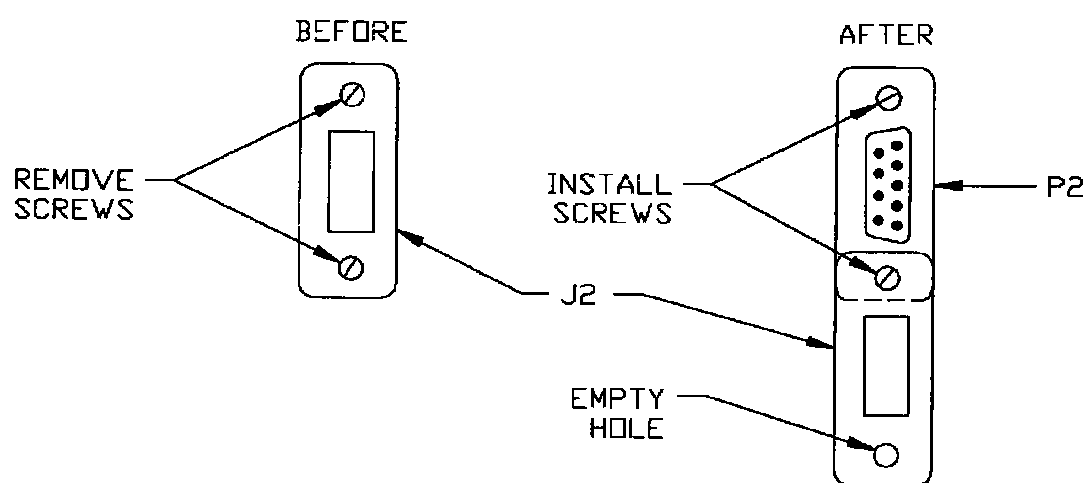
This modification is critical and should be implemented as soon as possible. Target date for completion of this modification is 20 days after receipt of this note. Report completed modification on WS Form H-28, Engineering Progress Report, for each system, according to instructions in EHB-4, part 2, using reporting code ASOS.

J. Michael St. Clair
Chief, Engineering Division

Attachment

W/OSO321:MGChristopher:713-1845:4/26/94:rev.5/2/94
WP51 Files: AMOD16.H11, EHB-11a disk, Spellcheck 5/2/94

AUTO BALANCE MODULE CONNECTOR



EHB11
MODIFICATION NOTE 16

FIGURE 1.